

August 01, 2018



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 20668
(FIRST REVISION)

EXPIRATION DATE: 2020-04-30

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Nuvation Research Corporation
Sunnyvale, CA
2. PURPOSE AND LIMITATION:
 - a. This emergency special permit authorizes the transportation of lithium ion batteries in alternative packaging. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
 - d. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.185(b) in that non-specification packaging is authorized.
5. BASIS: This special permit is based on the application of Nuvation Research Corporation dated May 24, 2018 and supplemental information dated June 6, 2018 and July 12,

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2018, submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries including lithium ion polymer batteries	9	UN3480	N/A

7. SAFETY CONTROL MEASURES:

a. OPERATIONAL CONTROLS:

(1) Each stack of battery modules must consist of twenty-one (21) modules connected in series with each module consisting of the number of cells as indicated in the application and on file with the Office of Hazardous Materials Safety Approvals and Permits Division.

(2) Each Battery Storage System (BSS) must contain ten (10) structural racks consisting of twenty (20) stacks connected in parallel.

(3) The state of charge of battery modules may not exceed 50% during transport.

(4) The total Watt-hour rating of each BSS may not exceed 600 kWh.

(5) The cells and battery modules connected in parallel must be equipped with an effective means to prevent dangerous reverse current flow.

b. TESTING:

(1) The lithium ion cells must have successfully passed the tests required in sub-section 38.3 of the UN Manual of Tests and Criteria, 6th Revision.

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(2) Each battery module need not be of a type tested in accordance with sub-section 38.3 of the UN Manual of Tests and Criteria, 6th edition, but must be equipped with a system capable of monitoring the module and preventing short circuits, or over-discharge between the modules in the system and any overheat or overcharge of the modules.

c. PACKAGING: Each BSS must be packaged as follows:

(1) Battery modules must have a strong, impact-resistant outer casing.

(2) The BSS may be packed in a strong outer packaging made of an insulated aluminum shell.

(3) The net weight of a BSS within the outer package shall weigh not more than 6,720 kg. and the gross weight of the container shall weigh not more than 22,000 kg.

(4) Battery modules and the BSS must be secured to prevent inadvertent movement within the outer packaging.

(5) Other than the wiring or bus bars required for electrical connectivity, the terminals may not support the weight of other superimposed elements.

d. MARKING: Each package prepared under the provisions of this Special Permit must be plainly marked with the approval number DOT-SP 20668.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

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10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous

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materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Kenny Herzog